

## CLAIMS

What is Claimed is

1. A method for manufacturing a bullet comprising:  
providing a jacket precursor;  
5 providing a pellet first core precursor;  
inserting the pellet into the jacket precursor;  
providing a second core precursor;  
inserting the second core precursor into the jacket precursor aft of the pellet;  
pressing the second core precursor against the pellet so as to deform the pellet to fill a  
10 frontal volume of the jacket precursor as a first core, with relatively less deformation of the  
second core precursor; and  
deforming an aft portion of the jacket precursor to contain the second core precursor as  
a second core.
- 15 2. The method of claim 1 wherein:  
a forward half of the jacket precursor is already in a substantially final shape prior to  
insertion of the pellet.
- 20 3. The method of claim 1 wherein:  
said pressing comprises at least two stages, a first relatively low force/pressure stage  
deforming the pellet to substantially fill said frontal volume and a second relatively high  
force/pressure stage deforming the second core precursor to laterally expand to fill an aft  
volume of the jacket precursor.
- 25 4. The method of claim 1 wherein:  
the second core precursor is provided having a convex front surface and a lateral  
surface which is cylindrical along a majority of a length of the second core precursor.
- 30 5. The method of claim 1 wherein:  
the second core precursor is provided having essentially a convex front surface, a  
cylindrical lateral surface, and a convex rear surface.
6. The method of claim 1 wherein:

the pellet has a density less than 30% of a density of the second core.

7. The method of claim 1 wherein the pellet is provided as a sphere.

5 8. The method of claim 7 wherein the second core precursor is provided as a circular cylinder.

9. The method of claim 1 wherein the first and second cores abut.

10 10. The method of claim 1 wherein the first core is essentially pure tin having a tin content of at least 99.85%, by weight, a yield strength of 11.0 MPa or less and a hardness of from about 3 to about 5 HB.

11. The method of claim 10 wherein the second core is essentially pure copper.

12. The method of claim 10 wherein the second core is essentially a polymer filled with a tungsten-based material.

13. The method of claim 1 wherein the first core is substantially a powder having a specific gravity less than 3.0.

14. The method of claim 13 wherein the second core is lead-based.

15. The method of claim 1 further comprising loading the bullet in a case selected from the group consisting of .357 Magnum, .357 Sig, .38 Special, .40 Smith & Wesson, 9mm Luger, and 10mm Automatic to form a cartridge.

16. The method of claim 15 wherein the case is 9mm Luger.

30 17. The method of claim 15 wherein the loading inserts the bullet into the case so that the cartridge has a length of 1.165-0.025 inch.

18. The bullet of claim 1 having a maximum diameter between 0.35 and 0.46 inch.

19. A bullet comprising:  
a jacket;  
a first core contained within the jacket; and  
5 a second core contained within the jacket aft of the first core;  
wherein the second core is lead-based and the first core consists in major part of a  
non-metallic powder.
20. The bullet of claim 19 wherein:  
10 the first core comprises at least 80.0 weight percent of one or more carbonates;  
the second core comprises at least 95.0 weight percent lead; and  
the jacket comprises at least 50.0 weight percent copper.
21. The bullet of claim 19 being an ogival bullet.  
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22. The bullet of claim 19 being full metal case, non-hollowpoint bullet.
23. The bullet of claim 19 wherein the bullet is of nominal 9mm caliber and has a mass of  
123.5-124.5 grains.  
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24. A bullet comprising:  
a jacket;  
a first core contained within the jacket ; and  
a second core contained within the jacket aft of the first core,  
25 wherein:  
the first core consists of at least 50 weight percent tin; and  
the second core consists of at least 50 weight percent tungsten.
25. The bullet of claim 24 wherein:  
30 the first core has deformability effective so that the bullet will not defeat level 2 body  
armor when impacted thereon.
26. The bullet of claim 24 wherein:

the first core comprises at least 80.0 weight percent tin;  
the second core comprises at least 95.0 weight percent tungsten-filled polymer; and  
the jacket comprises at least 50.0 weight percent copper.

- 5 27. The bullet of claim 24 wherein:  
the bullet has a weight of 120-125 grains.

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